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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,708	02/03/2004	Christian Gartner	100727-63/ Heraeus 414	1315

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EXAMINER	
WERNER, JONATHAN S	

ART UNIT	PAPER NUMBER
3732	

DATE MAILED: 06/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/770,708	GARTNER ET AL.	
	Examiner	Art Unit	
	Jonathan Werner	3732	

-- The MAILING DATE of this c mmunication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *3/30/06*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/17/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to Applicant's amendment received on 3/30/06.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 4/17/06 is noted. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 recites the limitation "previously scanned" in step (e). There is insufficient antecedent basis for this limitation in the claim. The labeling of two different steps (j) of claim 10 remains unclear. Claim 16 recites the limitation "the positioning template." There is insufficient antecedent basis for this limitation in the claim since only the first step (j) includes a "positioning template." Examiner recommends re-naming the second step (j) something else. Lastly, step (e) of claim 1 recites "data records of fabricated, previously scanned teeth." It is unclear how the data records can come from fabricated teeth when all previous steps refer to virtual 3-D data.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 10, 13-15, and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Jordan (US 6,152,731). As to claims 10 and 17, Jordan discloses a method of creating a dental prosthesis comprising recording and digitizing 3-D relationships in an oral cavity (Abstract; Figure 4); recording and digitizing 3-D data on bite/occlusion rims (22, Figure 6A; column 17, ln 2-18); recording of mandibular data (Abstract); processing recorded data and obtaining a virtual model that includes a virtual placement of teeth (Figure 6B; col 17, ln 19-24); selection of 3-D data records of previously scanned teeth (column 24, lines 35-45); virtual placement of teeth into the virtual model (Figure 6B); transferring the virtual placement to the model by direct placement of the fabricated teeth on the model (col 17, ln 27-37); affixing the teeth to the model (Figure 6B); attachment of a denture base (Figure 6B); and direct manufacture of a denture base according to data for a virtual denture placement, with positioning aids for positioning and affixing (22, Figures 6A-6B). As to claim 13, mandibular movements are simulated in/on a computer (col 23, ln 50-61; col 24, ln 3-4). As to claim 14, occlusion is inspected in/on the computer (col 23, ln 62-64). As to claim 15, Jordan discloses the placement of teeth is manually corrected and a new calculation

is performed to adapt to the bite and occlusion data (col 21, ln 17-45). As to claim 18, Jordan discloses the use of a device for the manufacture of a dental prosthesis comprising a scanning or recording apparatus (col 4, ln 21-22); a processing device (30,40); a 3-D data record (Figures 4-5); a processing module (10,20); a simulation module (col 23, ln 56-64; col 24, ln 3-4); and a device for forming a denture base from data records (Figure 6B). It should be noted that in a product claim, patentable weight is not given to the process by which the configuration is optimized if the final product is shown regardless of the process used. Additionally, patentable weight is not given to the intended use of a device in apparatus claims based on the functional language used in said claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan in view of Baumrind (US 6,621,491). Jordan discloses a method of creating a dental prosthesis as previously described but fails to show that an oral situation is recorded directly using a 3-D camera. Baumrind, however, teaches a method for recording 3-D diagnostic data of an oral situation using a 3-D camera (30, Figure 1; col 3, ln 35-40 and 48-51). Therefore, it would have been obvious to one having ordinary skill in the art at

the time of the applicant's invention to record an oral situation using a 3-D camera in order to provide a holistic view of the patient for treatment purposes as taught by Baumrind.

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan in view of Chishti (US 5,975,893). Jordan discloses a method of creating a dental prosthesis as previously described but fails to show scanning a plaster model. Chishti, however, teaches scanning a plaster cast of teeth to obtain 3-D data (col 5, ln 38-48). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to scan a plaster model so that the patient is not exposed to X-rays as taught by Chishti.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jordan in view of Brodkin (US 2002/0033548). Jordan discloses a method of creating a dental prosthesis as previously described but fails to show the positioning template is milled or rapid prototyped. Brodkin, however, teaches dental restorations formed by milling or rapid prototyping (paragraphs 3 and 10). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to mill or rapid prototype the positioning template since the machines make dental restoration designs based on the data supplied into small complex shapes and can thus reduce labor and increase structural reliability as taught by Brodkin.

R sponse to Arguments

8. New claims 10-18 submitted by Applicant are sufficient to overcome all previous claim objections as detailed in the previous Office Action.

9. Applicant's arguments filed 3/30/06 have been fully considered but they are not persuasive. Applicant submits that Jordan does not teach step (e) of claim 1. However, as described above, Jordan does indeed disclose selection of 3-D data records of previously scanned teeth (column 24, lines 35-45). In response to applicant's argument that "Jordan is entirely concerned with the virtual articulator [whereas] the present method is concerned with making the denture," a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Jordan discloses a method of creating a dental model as described above for use in dental articulation. However, Jordan's method of creating the model follows the same steps as the method of manufacturing a dental model as claimed by the Applicant – regardless of the future intended use of such a model, i.e. for use in dental articulation. The first step in the flow chart of Figures 4 and 5 describes selecting the scanned 3-D graphic data. Jordan further discloses step (e) in column 24 (lines 35-45) whereby 3-D data records of scanned teeth are selected.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Werner whose telephone number is (571) 272-2767. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on (571) 272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jonathan Werner
Examiner
TC 3700

6/7/06

MELBA N. BUMGARNER
PRIMARY EXAMINER